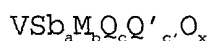
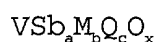
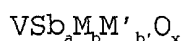
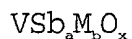


ABSTRACT

A catalyst composition for the vapor phase ammoxidation of alkanes and olefins of the general empirical formulae:



wherein M and M' are at least one element selected from magnesium, aluminum, zirconium, silicon, hafnium, titanium and niobium, M and M' being different, Q and Q' are at least one element selected from rhenium, tungsten, molybdenum, tantalum, manganese, phosphorus, cerium, tin, boron, scandium, bismuth, gallium, indium, iron, chromium, lanthanum, yttrium, zinc, cobalt, nickel, cadmium, copper, strontium, barium, calcium, silver, potassium, sodium and cesium, Q and Q' being different, a is 0.5 to 20, b is 2 to 50, b' is 0 to 50, c is 0 to 10, c' is 0 to 10 and x is determined by the valence requirements of the elements present.

The catalyst composition containing isolated vanadium and antimony species in an inert matrix is prepared by incorporating respective compounds of vanadium and antimony into the oxide of at least one or more M and adding by co-precipitation or impregnation one or more optional Q in the relative atomic proportions indicated by the subscripts.